Canad. Med. Ass. J.
Jan. 26, 1963, vol. 88

SPECIAL ARTICLE

The Formation and Function of the Children's Psychiatric Research Institute, London, Ontario

D. E. ZARFAS, M.D.,* *London, Ont.*

ABSTRACT

The Children's Psychiatric Research Institute was established in February 1960 by the Mental Health Branch of the Ontario Department of Health. Its formation was the result of co-operative efforts by the Ontario Association for Retarded Children, the University of Western Ontario and the senior members of the Mental Health Division of the Ontario Department of Health. It was established in London, Ontario, because of the interest in research in this area of medicine on the part of the University of Western Ontario Faculty of Medicine.

Children suspected of being mentally retarded are accepted on referral by physicians or social agencies in southwestern Ontario. A multi-discipline team examines these patients for causal pathology, levels of function at intellectual, social and emotional parameters, and family relationships and reactions. In-patient facilities are available if required for additional investigation. The opportunity provided by the Institute and its patients for research and teaching is utilized through its close relationship with the University of Western Ontario. A postgraduate course in problems of mental retardation is offered to interested physicians.

THE Children's Psychiatric Research Institute is a new facility in the Province of Ontario, designed primarily for the investigation and treatment of mentally retarded children. The Institute, established in February 1960, is financed entirely by the Mental Health Division of the Ontario Department of Health.

As might be expected, a new project of this nature does not come into existence without considerable effort and planning by many people. To outline the formation of this Institute, the activities of three principal groups will be briefly considered.

1. *The Ontario Association for Retarded Children*

This organization of parents and friends of the retarded has been active for many years in this province. One of the aims of this agency is to increase the number and the scope of clinical and research facilities for retarded children. In June 1957, after considerable investigation, this association presented a brief to the Minister of Health of Ontario, outlining the needs of the retarded and, among other things, requesting the establishment of facilities in the London area for diagnosis, residential treatment, and research into mental retardation.

2. *The University of Western Ontario*

A group of medical scientists under the leadership of Professor Murray L. Barr was already engaged in research into the cytogenetic and biochemical causes of mental retardation. The nearest hospital for the mentally retarded at that time was the Ontario Hospital School, Orillia, some 200 miles from London. This distance made it almost impossible for members of the staff of the University of Western Ontario to conduct research involving residents at the Orillia School. Certainly without the co-operation of the superintendent of the Ontario Hospital, London, who accepted patients on short-term transfer from Orillia, it may have been entirely impossible.

3. *The Ontario Department of Health*

Dr. B. H. McNeel and Dr. Clare Buck, the two senior members of the Mental Health Division of the Ontario Department of Health, have for some time demonstrated a persistent concern with regard to the needs of the retarded. It was with their planning and with the support of the aforementioned forces that the Hon. M. B. Dymond, M.D., Minister of Health of the Province of Ontario, was able to provide funds and authority for this project to proceed.

An additional factor made it relatively easy for the author to proceed with the planning and development of the Institute at the present site. This factor was the availability of the modern buildings and fine grounds of the Beck Memorial Sanatorium. This sanatorium, established in 1910, has set a precedent for superior care for tuberculous patients, the maximum capacity having reached 600 patients. However, owing to the recently improved methods of treatment of tuberculosis and the resulting de-

Presented at the Annual Meeting of the Canadian Pediatric Society, London, Ont., June 29, 1962.

*Superintendent, The Children's Psychiatric Research Institute, London, Ont., and Lecturer, Department of Psychiatry, University of Western Ontario, London.

crease in bed requirements, it was becoming financially impractical to maintain these facilities for this purpose. In the autumn of 1959, agreements were completed for the sale of this property by the London Health Association to the Province of Ontario. The situation of the property with its spacious grounds makes it relatively ideal from the points of view of proximity to the medical school and the War Memorial Children's Hospital, and the availability of sufficient space for patient activities and future development.

The proximity to a medical school and university provides several specific benefits. It facilitates the acquisition of staff well trained in all disciplines. It provides facilities for teaching relative to mental retardation at the undergraduate and postgraduate level, not only for students in medicine but also for those training in psychology, social work, education and nursing. It also provides a focal point for and a stimulus to research within the university.

The need for additional educational facilities in the field of mental retardation cannot be too greatly stressed at this time. There has been little opportunity for either undergraduate or postgraduate training in the diagnosis and management of retarded persons. There is little doubt that this deficit has contributed to the lack of medical interest and limited clinical facilities for the mentally retarded.

In designing the Institute's program, full consideration has been given to the modern, multidiscipline team approach. The staff represent the specialties of psychiatry, pediatrics, neurology, psychology, social work, education, speech pathology and nursing. In addition to those members on full-time staff, a large group of consultants representing most medical specialties are available for referral.

With regard to the types of patients seen, a broad interpretation of the term "mental retardation" has been made. Any child referred by a physician or a social agency is accepted if the child is suspected of being mentally retarded. As a result, a wide variety of children are encountered; included are children who are seriously mentally retarded, physically handicapped, mentally ill, those with mild brain damage, and as might be suspected, children of normal intellect who are having difficulties in learning. No age group has been specified, although 75% of the patients seen are under the age of 12 years. The service is provided without cost.

Patients are generally seen first as outpatients. Each child referred is subjected to total assessment. No child is accepted simply for psychological testing. This principle is quite rigidly maintained on the basis that psychology or any other single discipline can contribute only a limited and perhaps biased aspect of the child as a whole. Assessment of the patient must include not only the intellectual functioning but also the emotional, physical, social, cultural and educational status. In addition, assessment must include a thorough understanding of the child's family and environment.

In each case either a pediatrician or psychiatrist is in charge. However, should the problems be different from those first suspected, the case responsibility may change after the evaluation conference is held.

The evaluation begins with assessment of the child's needs and reasons for referral to the Institute. The first contact with the patient's family is made under the direction of the social work staff. This may be effected directly by the team social worker or, under his guidance, by the community public health nurse. The latter method is encouraged, since the necessity for continued community care following assessment can be accomplished best by the establishment of a close working relationship between community health agencies and the Institute. This contact provides a history of the patient's previous investigations and hospitalizations, including delivery room and nursery reports. School reports and a psychiatric social history are obtained. When indicated, home visits are made by the social worker. The educational staff may visit the school for first-hand observation of the child in this setting and to discuss the specific problems faced by the child's teacher. In this way, a more meaningful report can be made to the educational authorities following evaluation.

On the day allotted by the team for assessment, the patient and both parents are again seen by the social worker, then as a family group by the physician (Fig. 1). Later, while the physician interviews the parents, the child is seen in play activity and for psychological examination. The child is examined physically and neurologically, and the usual routine blood and urine examinations are carried out. Radiographs of the skull and wrists and urine tests for phenylketones are also routinely performed. In addition, each child is examined for sex chromosome abnormalities by use of the buccal smear technique. When considered necessary, aminoacid screening of the urine and complete cytogenetic studies are performed. These latter examinations will be conducted routinely when our new laboratory facilities are ready in the autumn of 1962. Complete chromosome studies of all mongoloid children are being carried out at this time, not only as part of a specific research project but also because of the clinical implications of the translocation 13-15 syndrome, where transmission of mongolism may occur on a more predictable basis.

Following evaluation, each case is presented at a staff conference; the diagnosis, according to the classification of the American Association on Mental Deficiency, is agreed upon and the outline of recommendations and management is formulated by the team. The physician then arranges to meet again with the parents, at which time the findings and plans for management are discussed with them. Provisions are made for long-term guidance and

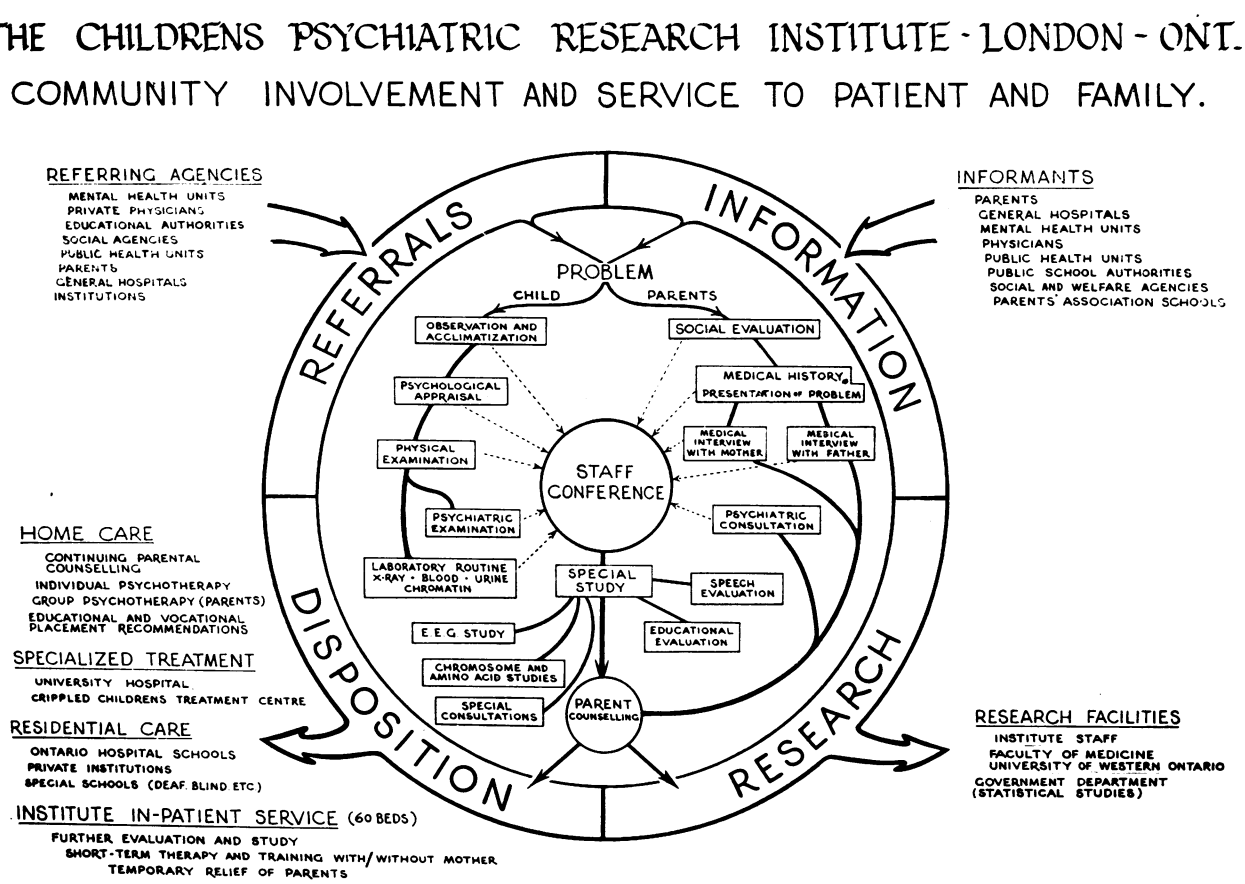

Fig. 1

individual or group psychotherapy for both patients and parents when indicated. Follow-up is provided either by the pediatrician, family doctor, referring agency or by the clinic staff.

The Institute teams use the in-patient setting, which now consists of 66 beds: (a) to examine the child for clarification of diagnosis; (b) to observe the child's reactions to the ward and activity programs, as well as to assess his functioning in a school setting; (c) to provide treatment; and (d) to provide short-term relief for parents when there is some unusual stress at home, when the mother needs a holiday or when separation is necessary to assist the parents during psychotherapy.

Research

One of the functions of the Institute is the provision of patients and their records for research. Medical research in mental retardation in London is co-ordinated by the Research and Training Advisory Committee of the University of Western Ontario. The members of this committee include representatives of the Institute and eight departments of the University of Western Ontario Faculty of Medicine. The Institute's role is to provide facilities for patient examinations. The case records obtained are long, detailed and as complete as possible, to facilitate these studies. Standardization of diagnostic grouping is observed on the broad etiological basis outlined by the American Association on Mental Deficiency. Research of a basic nature tends to be centred in the laboratories of the medical school, while clinical research is centred primarily at the War Memorial Children's Hospital and at the Institute. At this time investigations are progressing in the fields of cytogenetics, human genetics, endocrinology, biochemistry, psychiatry, pediatrics, psychology and social work.

Teaching

The philosophy of improved diagnosis and appropriate treatment for the intellectually handicapped child is relayed to professional and lay groups of all descriptions. The Department of Pediatrics of the University of Western Ontario provides intensive lectures on the clinical entities and neurological aspects of conditions contributing to mental retardation. Didactic lectures on the broad aspects of mental retardation and clinics to undergraduate medical students are now established in the Department of Psychiatry. Training is available for postgraduate psychiatric students, and a one-year course on the subject of mental retardation, under the auspices of the University and the Institute, is now available for physicians.

In the establishment of this Institute with its close university affiliation, the Ontario Department of Health has provided a unit offering a clinical service to intellectually handicapped persons, and at the same time has provided facilities for research and education. It would appear that this organization will be utilized as a model for the

development of similar clinics elsewhere. In its submission to the Royal Commission on Health Services, the Canadian Association for Retarded Children has recommended the establishment of 15 similar units elsewhere in Canada.

SUMMARY

The formation of the Children's Psychiatric Research Institute, London, by the Mental Health Division of the Ontario Department of Health is described. The merits of the geographical placement and the close affiliation with the University of Western Ontario are discussed. The Institute's approach to a variety of children's problems is outlined. In association with the University of Western Ontario, teaching to undergraduate medical students and postgraduate physicians is available. The utilization of the clinical services of the Institute as a basis for research into mental retardation by a variety of medical disciplines is also broadly outlined.

GENERAL PRACTICE

Useful Measures in the Prevention of Deep Vein Thrombosis in the Legs

ERIC M. NANSON, M.B., Ch.B., F.R.C.S.(Eng.), F.R.C.S.[C], F.A.C.S.,
Saskatoon, Sask.

ABSTRACT

The three probable factors involved in deep venous thrombosis are: (1) stasis, (2) alteration in the endothelium of the veins, and (3) alteration in the clotting mechanism of the blood.

Control of stasis is assisted by elevation of the foot of the bed and by the use of washable elastic stockings and early ambulation, together with foot exercises. To prevent damage to the endothelium of the veins during operation, the heels should be elevated off the operating table by means of a small rolled towel in order to take weight off the calf muscles. The use of elastic stockings demonstrated in diagrams and some of the fallacies in connection with their use are outlined.

MUCH has been written about deep vein thrombosis in the legs and the various methods employed for its prevention. It is recognized that the condition is as common on the medical as on the surgical wards. Certain types of patients appear to be particularly prone to develop it. Thus, sufferers from congestive cardiac states, cancer, diabetes, hyperlipemia, hypotensive conditions, polycythemia, and severe infections such as pneumonia are in serious danger of developing deep venous thrombosis while lying in bed. Patients who have suffered severe trauma, especially of the lower extremities, dehydrated patients, and those who have had a recent splenectomy are all candidates for developing this condition.

Virchow enumerated three probable factors involved in deep venous thrombosis: (1) stasis, (2) alteration in the endothelium of the veins, and (3) alteration in the clotting mechanism of the blood.

Since Virchow's time, writers have added no new factors of significance, yet factual scientific proof that these three factors are involved is hard to demonstrate. Mostly, the evidence is deductive. Robertson, Moore and Mersereau[1] have demonstrated in the rat that minimal trauma such as gentle pressure will cause endothelial damage and subsequent clot formation in the inferior vena cava. McLachlin *et al.*[2] have recently drawn attention again to the role of stasis, and have shown by venography that elevation of the legs by 15° will obviate this. The literature on the alteration in the clotting mechanisms is confusing and inconclusive.

However, because physicians and surgeons have believed that these factors are involved to a greater or lesser degree, and in varying proportions, they have adopted certain procedures to minimize them, particularly in the susceptible types of patients referred to previously.

This has been done because of the immediate dangerous complication of pulmonary embolism caused by a clot breaking loose from the deep vein thrombosis; and because of the late seriously disabling complication of postphlebitic venous stasis of the lower leg with a probability of associated

From the Department of Surgery, University Hospital, Saskatoon, Sask.